

## 4 Executive Summary

An information system can be any organized combination of people, hardware, software, communications networks, and data resources that collects, transforms, and disseminates information in an organization. People have relied on information systems to communicate with each other using a variety of physical devices i.e. hardware, information processing instructions and procedures i.e. software, communication channels i.e. networks and stored data i.e. data resources.

Staff Information systems has needed to process staff data granted by, and used in, business operations. Such operations support systems produce a variety of information products for internal and external use. However, they do not emphasize producing the specific information products that can best be used by managers. Further processing by management information systems is usually required. The role of a business firm's operations support systems is to efficiently process business transactions, control industrial processes, support enterprise communications and collaboration, and update corporate database

Staff Information System is a critical resource for management success; it serves the organization, providing managers with reports and in some cases, with on-line access to the organization's current performance and historical records.

Schlumberger manages its business through 33 Geo Market regions, which are grouped into four geographic areas: North America, Latin America, Europe, CIS & Africa and Middle East & Asia. The company was founded by the two Schlumberger brothers who invented wire line logging as a technique for obtaining down hole data in oil and gas wells. Today, it continues to build on the industry's longest track record of providing leading edge E&P technology to develop new advancements-from reservoir to surface. Schlumberger has always invested significant time and money on research and engineering as a long-term strategy to support and grow its technology leadership.

Today, Schlumberger Oilfield Services solutions include open-hole and cased-hole wire line logging; drilling services; well services, such as cementing, coiled tubing, stimulations and sand

control; well completion services including well testing and artificial lift; interpretation and consulting services; and integrated project management. Strong technical and operational support to the field is vital to the success of any complex global operation that includes remote locations. The key is to provide real-time linkage with world-class experts and knowledge, delivering the latest and best problem-solving capabilities-anywhere, anytime

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## 5            **Role of participation**

Successful management of staff information systems and technology presents major challenges to schlumberger managers and professionals this information systems function represents.

A major functional area of business equally as important to the organization success as the functions of staff incentives salaries commission and finance operations management marketing and human resources management. An important contributor to operational efficiency employee productivity and morale and customer service and satisfaction . major source of information and support needed to promote effective decision making by managers and organizational processionals.

vital ingredient in developing competitive products and services that give an organization a strategic advantage in the global marketplace and dynamic rewarding and challenging career opportunity for millions of staff Key component of the resources infrastructure and capabilities of today's networked business enterprise.

Information technology is not being used effectively by companies that use IT primarily to computerize traditional business processes instead of developing innovative e business process involving customer's suppliers and other business partner's electronic commerce and web enabled decision support.

Information technology is not being used efficiently by information systems that provide poor response times and frequent downtimes or IS professionals and consultants who do not properly manage application development projects.

## 7 Introduction and Overview of the organization

Schlumberger is the leading oilfield services provider, trusted to deliver superior results and improved E&P performance for oil and gas companies around the world. Through our well site operations and in our research and engineering facilities, we are working to develop products, services and solutions that optimize customer performance in a safe and environmentally sound manner.

Schlumberger was founded in France in 1927 to provide technology solutions to the oil-field industry. From its initial offering of technology that greatly improved exploration of oil and gas deposits, Schlumberger has grown into a global enterprise that provides communications and security solutions to the oil-field industry and to other enterprises as well.

Conrad Schlumberger founded Schlumberger on advance technology more than 80 years ago together with his brother Marcel Schlumberger. They opened first office at 30, rue Fabert in Paris. Today, their commitment to technology improvement continues to provide the basis for developing new generations of solutions that meet the changing needs of our customers. The history of last three decades of this company is briefly explained below.

### Table No.1

**1972** Introduced Dual Later log tool for simultaneous measurement of shallow region invaded by borehole fluids and the deep undamaged formation.

**1977** Introduced Cyber Service Unit.

Acquired The Analysts (directional drilling and mud logging services).

Commercialized the Electromagnetic Propagation Tool (EPT).

Developed the CNTG four-detector neutron porosity tool.

**1978** Developed SDT, the first generation digital sonic tool for processing of compression and shear sound speeds in formations.

- 1979** Made first observation of propagating slow wave with applications such as eliminating unwanted signals.
- 1980** Completed first measurements-while-drilling (MWD) job in the Gulf of Mexico.
- 1981** Acquired Applicon and Balteau.  
Implemented first international data links with e-mail.
- 1982** Developed Crystal, a graphical log interpretation workstation which ultimately became the basis for GeoFrame software.
- 1983** Implemented first commercial user of ARPANet (Palo Alto lab. Opened Cambridge Research Center in England.
- 1984** Acquired SEDCO drilling rig company and 50% of Dowell of North America.  
Founded Anadrill by combining the drilling segment of Dowell and The Analysts.  
Developed ultrasonic Cement Evaluation Tool (CET) for adding azimuthally information to cement bond analysis.  
Began Nuclear Magnetic Resonance (NMR) petrophysics research.
- 1985** Formed Sedco Forex Drilling Company.  
Introduced Formation Micro Scanner tool.  
Acquired Merlin and 50% of GECO.  
Deployed Schlumberger Information Network (SINet).  
Introduced first VSAT terminal.  
Field tested borehole linear accelerator (LINAC) as a density tool.
- 1986** Merged Flopetrol with Wireline to create Wireline & Testing.  
Introduced Phaser Induction tool to improve detection of thin beds.  
Prototyped Combinable Magnetic Resonance (CMR) tool.
- 1987** Acquired Neptune (North America), Bosco and Cori (Italy), and Allmess (Germany).  
Registered slb.com as an Internet domain name.
- 1988** Acquired remaining 50% of GECO.  
Introduced first logging-while-drilling (LWD) tool.

- 1989** Introduced MAXIS\* 500 logging unit.
- 1991** Acquired PRAKLA-SEISMOS.  
Used geosteering for the first time to plan the drilling path in horizontal wells.  
Introduced the Modular Formation Dynamics Tester and the Formation MicroImager.
- 1992** Acquired GeoQuest Systems, Inc.  
Converted SINet to TCP/IP and www capability.
- 1993** Created GeoQuest product line by merging Schlumberger Data Services, Finder Graphics and GeoQuest Systems, Inc.  
Launched IDEAL concept (Integrated Drilling Evaluation and Logging System) and ran first compressional sonic logs while drilling.
- 1994** Introduced Oil Partnering Network in the North Sea sector.
- 1995** Introduced Platform Express technology, SIMPLER advanced land rig concept, ARC5 logging-while-drilling tools and MAXIS Express logging unit.  
Acquired Intera Technologies Corp. petroleum division, AEG meter, and ECLIPSE reservoir study team and reservoir technologies.  
Launched Integrated Project Management as an independent service and engineering group.  
Created Omnes joint venture between Schlumberger and Cable & Wireless plc.  
Commercialized Combinable Magnetic Resonance (CMR) tool.
- 1996** Conceived real-time reservoir management for improving petroleum reservoir recovery and providing high-end IT solutions to petroleum industry.  
Acquired Oilphase.  
Completed first commercial sonic imaging job
- 1997** Introduced ClearFRAC non-polymer, damage-free fracturing fluid.
- 1998** Acquired Camco International, Inc.  
Introduced PS PLATFORM fifth generation logging tool and High Resolution Laterolog Array (HRLA).
- 1999** Entered joint venture with Smith International, creating the world's largest drilling fluids

company, M-I L.L.C (60% Smith International, 40% Schlumberger).

Deployed Houston remote connectivity teleport.

**2000** Combined Geco-Prakla with Western Atlas to create WesternGeco (70% Schlumberger, 30% Baker Hughes).

Launched IndigoPool.com.

Began conducting Q-Marine surveys.

**2001** Acquired Sema plc. (IT consultancy), Phoenix and Sensa (fiber optic distributed monitoring).

Deployed Macae remote connectivity teleport.

Formed Schlumberger Information Solutions (SIS) to support real-time reservoir management and E&P business optimization processes.

**2002** Deployed Singapore remote connectivity teleport.

Introduced Pro VISION real-time reservoir steering tool for LWD, OrientXact perforating system, Slim Xtreme slimhole, high-pressure, high-temperature wireline logging platform and Flex STONE advanced flexible cementing system.

Acquired A. Comeau and Associates Limited to enhance capabilities in artificially lifted wells.

**2003** Began conducting Q-Land surveys.

Launched PowerDrive Xceed fully rotational steerable system, MaxTRAC production services tractor, seismicVISION LWD system, LiteCRETE lightweight, high performance cementing system, PVT Express PV-T mobile laboratory and DecisionXpress petrophysical evaluation system.

Deployed Aberdeen satellite manufacturing facility and second teleport.

Acquired VoxelVision (high-end PC-based visualization and seismic technology).

Acquired stake in premier Russian oilfield services company PetroAlliance Services Company Limited.

**2004** Completed divestiture of SchlumbergerSema to Atos Origin.

Launched the PowerDrive X5 rotary steerable system (RSS) with integrated measurements, sonic VISION sonic-while-drilling tool and Power Drive vortex rotary

steerable system.

Acquired the Decision Team oil and gas software and consulting services firm and AOA Geo-marine Operations (AGO), a pioneer in CSEM (controlled-source electromagnetic) and MMT (marine magnetotelluric) technologies.

Opened the Russia Technology Hub, located within the campus of Gubkin Russian State University of Oil and Gas; opened the second phase of expansion of the Schlumberger Reservoir Completions Center (SRC). Established the industry's first long-term reservoir monitoring program between Statoil and Western Geco.

Awarded the world's largest-ever 4D seismic project, shooting over the Marlin Field offshore Brazil for Petrobras.

**2005** Launched Scope family of while-drilling technology services: Stethoscope formation pressure, Telescope high-speed telemetry, PeriScope deep directional resistivity, and EcoScope multifunction formation evaluation; each represents a step-change in LWD and MWD technology

**2006** Acquired the 30% minority interest in WesternGeco held by Baker Hughes.  
Introduced the Quicksilver Probe wire line sampling technology, a method to deliver formation fluid samples quickly with little to no contamination

**2007** Completed acquisitions of Geo-system (land and marine electromagnetic and seismic imaging) and Tyumenpromgeofizik a (geophysical and wire line logging); integrated Geosystem into Western Geco Electromagnetic

Launched Contact family of multistage fracturing and completion services, which have integrated stimulation technologies



Schlumberger Limited is the world's leading oilfield services company supplying technology, information solutions and integrated project management that optimize reservoir performance for customers working in the oil and gas industry. Founded in 1926, today the company employs more than 79,000 people of over 140 nationalities working in approximately 80 countries.

The company comprises two business segments.

Schlumberger Oilfield Services supplies a wide range of products and services from formation evaluation through directional drilling, well cementing and stimulation, well completions and productivity to consulting, software, information management and IT infrastructure services that support core industry operational processes. Western Geco is the world's largest seismic company and provides advanced acquisition and data processing services. Schlumberger has principal offices in Houston, Paris and The Hague. Revenue was \$27.16 billion in 2008. Schlumberger stock is listed on the New York Stock Exchange, ticker symbol SLB, on the Euro next Paris, Euro next Amsterdam, London and the SWX Swiss stock exchanges

## **Products and services:**

Schlumberger Oilfield Services is the leading supplier of services and technology to the international petroleum industry providing virtually every type of service to the upstream exploration and production industry.

### ➤ **Reservoir Evaluation and Development:**

This product group provides technical solutions to the E&P Industry in the following service segments: Seismic Acquisition, Wire line, Drilling and Measurements, Well Services, Well Completions, and Integrated Project Management.

### ➤ **Schlumberger Oil & Gas Information Solutions (SIS):**

This product group supports real-time decision-making and helps drive business performance enabling the transformation of its clients in the global oil and gas industry. SIS provides expertise in Services, Software, Information Management, Information Technology, and Solutions.

### ➤ **Schlumberger Sema:**

It is a leading information technology services company providing IT consulting, systems integration, managed services, products and IP network security solutions serving the oil and gas, telecommunications, utility, finance, transport and public sector markets.

### ➤ **IT consulting:**

Helping our customers transform their business processes to improve efficiency and become more competitive and profitable.

### ➤ **Systems Integration:**

Building complex mission critical and large-scale is technical business systems. Development of applications and enhancement is existing systems.

➤ **Managed Services:**

Partnering with clients is to manage business critical processes.

➤ **Products:**

Smart cards for wireless, finance, telecom, transport, identification and network security market applications; web pay phones; point-of-sales, parking and mass transit terminals and associated management systems; customer care and billing systems/ energy generation exchange boards.

**Major competitors**

Schlumberger is ranked overall first in the market of oil and gas companies and still has very little risk prediction. The market share of Schlumberger is 40.71 billion dollars. Its major competitors are

1. Halliburton Co
2. Transoceanic Inc
3. Baker Hughes Inc
4. Enbridge Inc
5. Nabors Industries Ltd

**Table No.2**

COMPANY	SYMBOL	MARKET CAP.
Schlumberger Ltd	SLB	40.71 B
Halliburton Co	HAL	21.49 B
Transoceanic Inc	RIG	15.51 B
Baker Hughes Inc	BHI	15.26 B
Enbridge Inc	ENB	9.06 B
Nabors Industries Ltd	NBR	8.80 B

Schlumberger has started joint ventures with some of its competitors for further progress in the progress. GECO-Prakla (BHI) and Western Geophysical (Schlumberger) have been merged to create a new joint venture which incorporates the surface seismic data acquisition and processing businesses of the two companies. The new venture was named as Western-GECO and was owned 70% by Schlumberger and 30% by BHI. And in 1999 Schlumberger went to a joint venture with the Smith international (70% Smith & 30% Schlumberger)

## **6. Main offices**

Schlumberger manages its business through 33 Geo Market regions, which are grouped into four geographic areas: North America, Latin America, Europe, CIS & Africa and Middle East & Asia. The GeoMarket structure offers customers a single point of contact at the local level for field operations and brings together geographically focused teams to meet local needs and deliver customized solutions. Working together with the company's technology segments, the GeoMarkets provide a powerful conduit through which information and know-how flow to the customers.

## **MIS Operations**

## **MANAGEMENT INFORMATION SYSTEM (MIS):**

Reduce the risks and costs associated with poor data quality. Rapid, secure access to operational data of known quality boosts your efficiency and profitability. SIS is the leader in E&P information management solutions, offering tailored combinations of technology and expert consulting services.

### **Finder:**

Corporate "master" database.

- **Spreadsheet Loader**  
Data loading via spreadsheets
- **Smart View**  
GIS visualization for your corporate master database
- **Finder Production**  
Effectively manage your data

### **ProSource:**

Browse and manage information in multiple distributed repositories.

- **Integration Framework**  
Data integration and abstraction layer
- **ProSource Results Manager**  
E&P results management
- **ProSource Seismic Manager**  
Seismic data management for project and SEG Y data in a MultiFinder and distributed environment

### **E Search:**

Physical record management for the E&P industry.

**Drill DB:**

Corporate drilling data management solution.

**Log Data Manager:**

➤ **LogTRAK**

Well log curve results management

➤ **LogDB**

Raw well log curve file storage (LogDBWeb - Simple web access for browse and export from LogDB)

**Information systems**

Schlumberger is using different Information systems for different levels and the systems include Transaction support systems for the first-line managers and MIS, EIS for middle and top-level management.

**Transaction support system (TSS):**

Schlumberger has maintained information systems for transactions and now the latest development has been the development of information management systems for e-transactions.

**PIDX XML:**

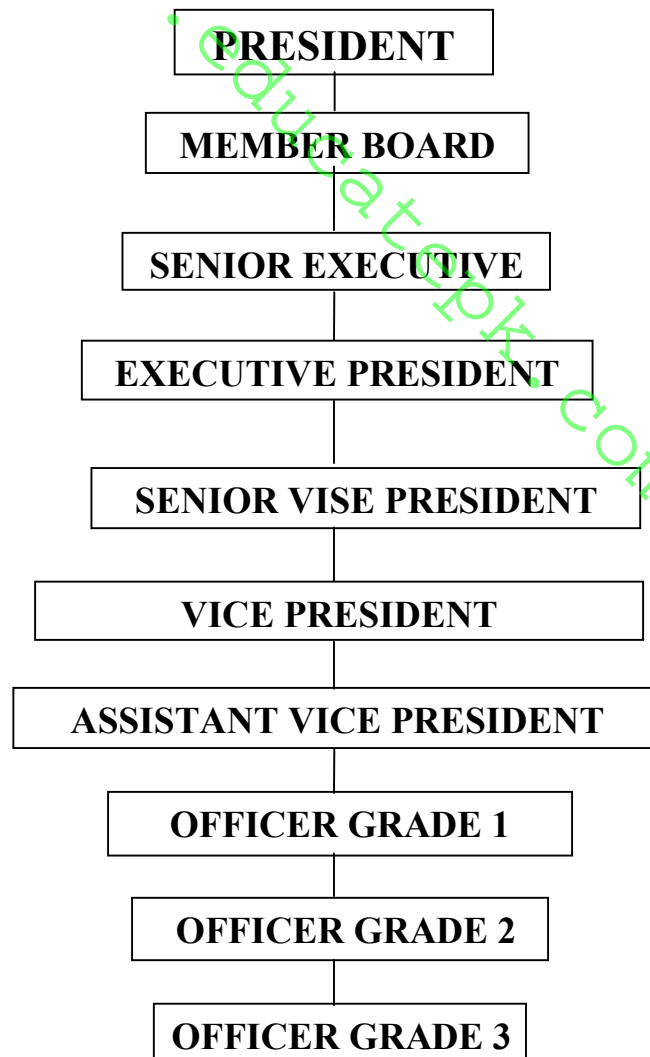
Unocal (an industry leader in electronic commerce), Schlumberger Oilfield Services and Digital Oilfield reached a milestone in the automated electronic exchange of invoicing information by successfully completing the first PIDX XML (Extensible Markup Language) invoice transaction complying with API standards. XML enables seamless Web-based transactions among trading partners.

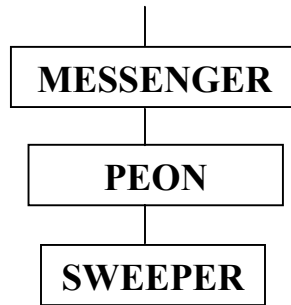
## Expert information systems (EIS)

GeoMarket experts at Schlumberger group anything learned through In Touch This is a global initiative for capturing, managing, and sharing knowledge that accelerates product development and increases response time. With this just-in-time knowledge, rather than just-in-case information,

## 7. Organization Structure

Schlumberger has principal offices in Paris, Houston and The Hague, from which the executive management team directs all Schlumberger operations worldwide.



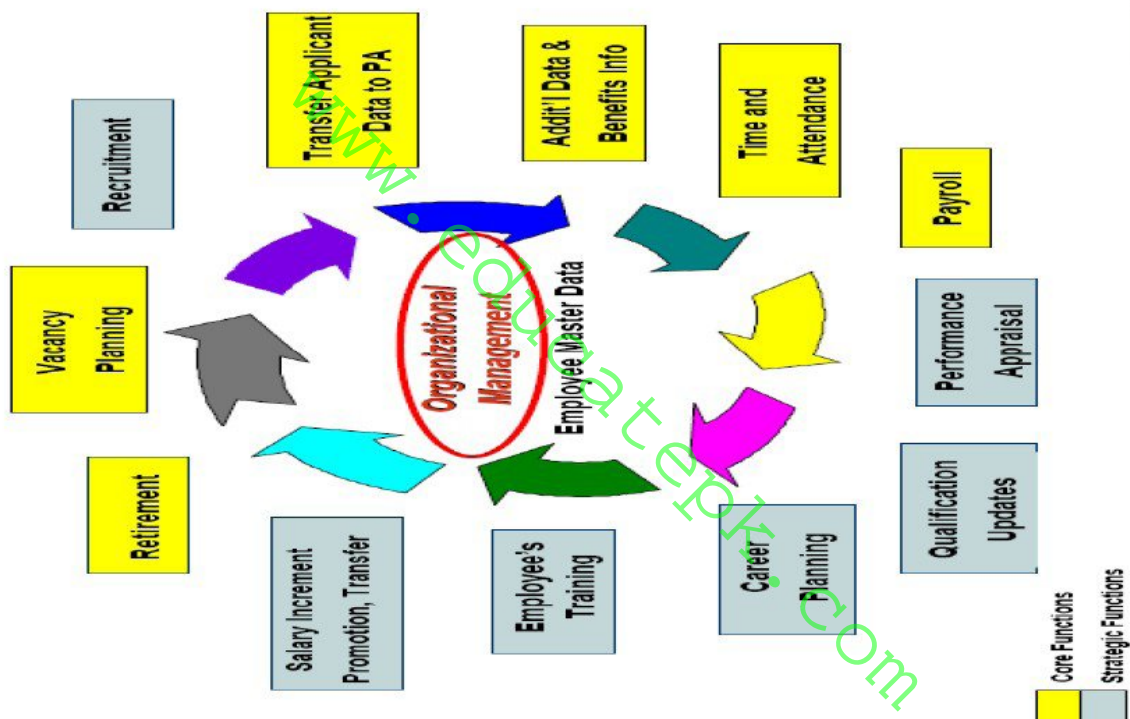


## **Executive Management**

<b>Chairman &amp; CEO</b>	Andrew Gould
<b>Vice President Investor Relations</b>	Malcolm Theobald
<b>Executive Vice President</b>	Chakib Sbit
<b>Vice President Communications</b>	Rod Nelson
<b>Chief Financial Officer</b>	Simon Aya
<b>Chief Technology Officer</b>	Ashok Belani
<b>President Drilling &amp; Measurements</b>	JF Poupeau
<b>President Testing Services</b>	Hatem Soliman



## Organization management reporting Cycle



**a. No of employees working in MIS department**

Schlumberger employs over 80,000 people working in 80 countries to optimize customer performance in a safe and environmentally sound manner. Schlumberger has about 60 domestic and 250 international locations.

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## 8. Functions of the MIS Departments

### Seismic Data Management:

- **Seismic Data Management System (SDMS)**  
Cross-vendor project management for seismic data
- **Expeditor**  
Manage, entitle, store and track company seismic assets

### DAEX

A data transfer framework for E&P applications.

- **Geoshare**  
Half-Link transfer manager

### Secure Data Access (SDA):

Record level data entitlements.

### DECISION SUPPORT SYSTEM (DSS)

#### ➤ **DECISIONPOINT:**

Decision Point solutions are a common location, where any member of the Schlumberger can communicate and cooperate with each other using relevant data and information, saving time and improving efficiency.

#### **Control@aGlance:**

Is personalized decision control workspace that provides convenient Web access to monitor and manage your key performance indicators (KPI) for faster decision-making and better business control? The Control@aGlance workspace inside the Decision Point solution, consists of a

variety of components that provide access to news, notifies, reports, production and financial information from a variety of data sources.

**Data Work:** is a multi-data source access workspace providing integrated access and browsing of E&P data. It includes components such as Data Browser, Data Search, Data Availability and Data by Depth that provide convenient viewing and analysis of data using powerful search and visualization tools so you can exploit the value of all available assets across multiple data stores.

**Data access integrated data source Web browser:** is a comprehensive E&P data browsing tool that provides complete Web-based workflow solutions

### **Learning Work:**

Learning Work is a complete, integrated learning environment enabling faster learning through collaboration, just in time learning and sharing best practices.

### **DATABASE SERVICES:**

1. Front office they are using the Oracle 8 i
2. Back Office They are using MS SQL SERVER (Sequential Query Language)

### **DATA BROWSER:**

The Data Browser is a Drilling Office application to set up field, structure, slot, well, and borehole horizontal and vertical reference systems. These data are available for use by the Well Design, Survey Editor, Close Approach, BHA Editor, Drill SAFE torque and drag analysis and Hydraulics applications. Drilling data are stored in the GeoFrame project database and can be shared with other GeoFrame applications.

### **Features:**

1. Create new data such as fields, structures, slots, well, boreholes and targets.
2. Edit and delete existing data in the project database.
3. Select projection coordinate systems for individual fields and structures.
4. Select and deselect definitive surveys for boreholes.

5. Simple, effective and intuitive browsing of the shared Drilling Office database.

#### a. Major Functions

##### Data Warehouse

Operational data is the data you use to run business. This data is what is typically stored, retrieved, and updated by your Online Transactional Processing (OLTP) system. An OLTP system may be, for example, a reservations system, an accounting application, or an order entry application.

Informational data is created from the wealth of operational data that exists in your business and some external data useful to analyze your business. Informational data is what makes up a data warehouse. Informational data is typically:

- Summarized operational data
- De-normalized and replicated data
- Infrequently updated from the operational systems
- Optimized for decision support applications
- Possibly "read only" (no updates allowed)
- Stored on separate systems to lessen impact on operational systems

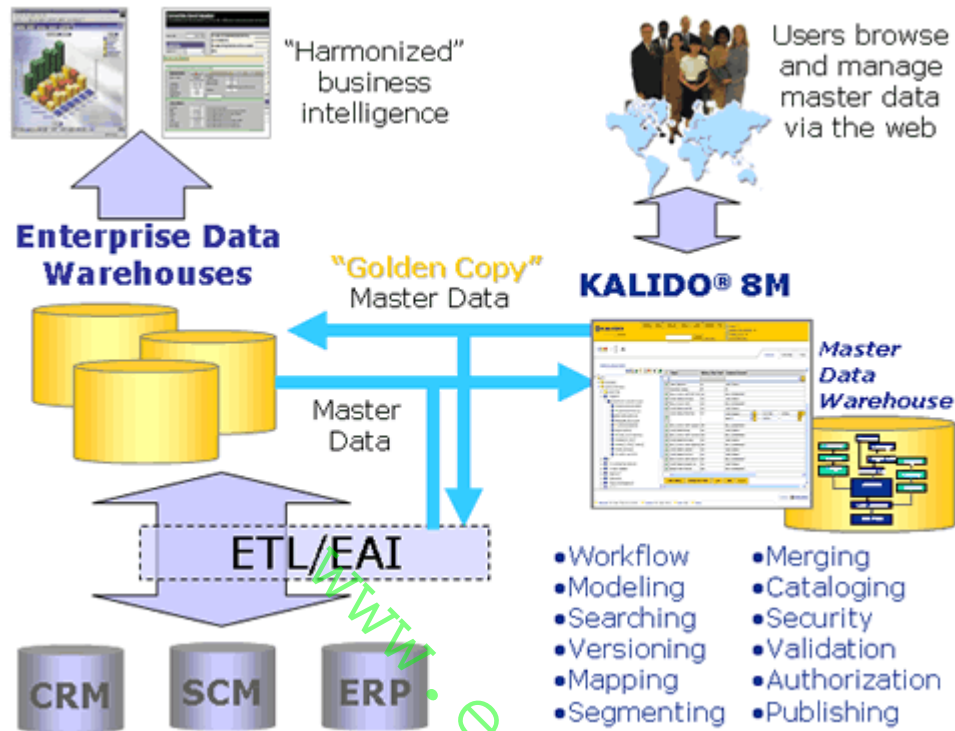


Figure No.2

### **Key benefits**

- Provides consistent context for measuring business performance.
- Increases business efficiency by eliminating many of the information quality problems that cause them.
- Puts business people — the business information experts — in control of master data governance.
- Shares master data across the enterprise via corporate intranets and extranets, for greater business transparency and understanding.
- Delivers historic, current and planned views of data, facilitating trend analyses, scenario planning and regulatory Audi.

### **Key capabilities**

- Manages any type of master data—a large enterprise typically has hundreds of master data categories and KALIDO can manage all of them—from products and customers to brands, markets, territories and more.

- Facilitates data governance—puts business people in control of master data quality in a collaborative, workflow-driven environment.
- Offers flexible master data modeling—featuring powerful cataloging, segmenting, and merging and mapping facilities.
- Loads non-conformant master data—instead of rejecting invalid master data, all master data is loaded even if it doesn't conform to the master data model—workflows ensure that the data or the model—is revised accordingly.
- Maintains master data history historic views can be re-created to support audits and historical analysis as master data adapts to business changes over time.
- Exchanges master data with other systems—such as data warehouses, ERPs and other systems.

### Cross Functional System

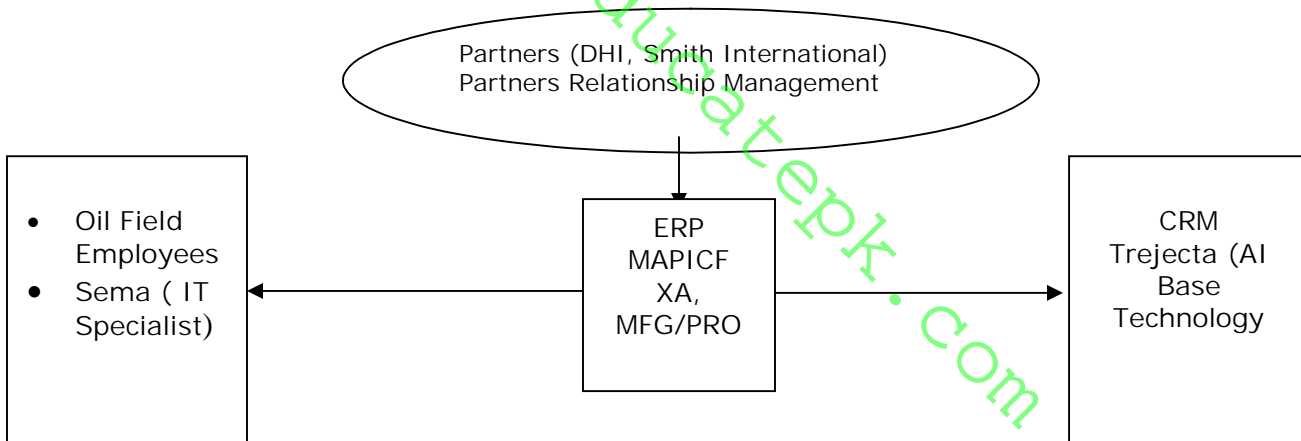


Figure No.3

### CRM

AI base CRM this software is called the Trejecta and this is working like that it build a complete profile of the customer and their behavior about their interest and dislikes.

### Marketing

Bright ware Software which is used for marketing and this software vender is Middleawre.cop and this is totally structured approach and this makes decision on the bases of the instruction given by the marketing specialist

### Partners Relationship Management.

Partner relationship management software helps the Schlumberger to interact with the two partners (DHI, Smith International).

### Executive Information System

Schlumberger has principal offices in New York, Paris, The Hague from which the executive management team directs all operations in the Schlumberger Oil Field Services and Western Geco business segments Worldwide.

For this purpose they use the following software, hardware and networks mentioned in the diagramed.

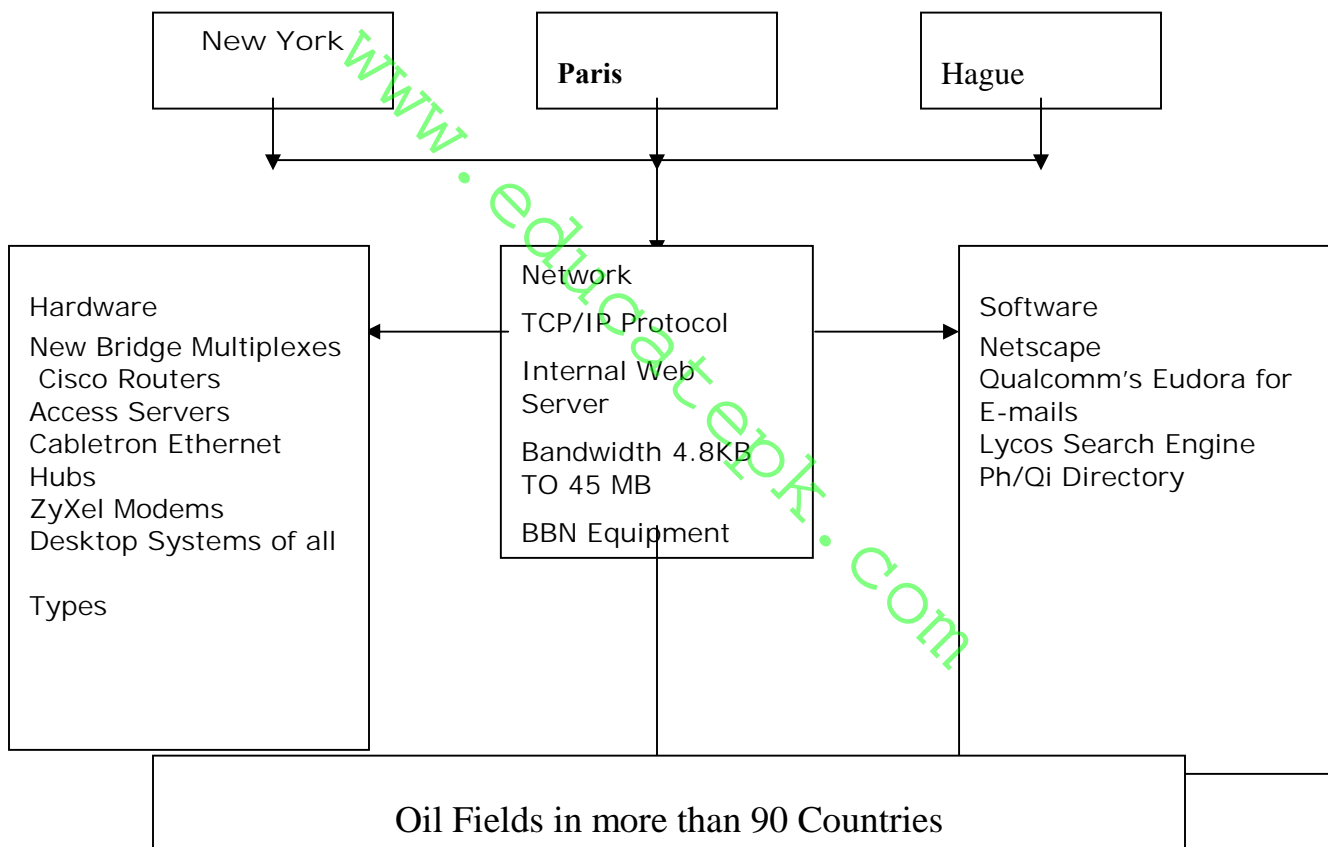


Figure No.4

### CRM (Customer relation management)

CRM is very important for organization now a day. Schlumberger is using Trejecta software for their CRM. They are using AI technology for CRM. This software is outsourcing from the Middle Ware.



## **Call Center**

### **a) Customer Web-based Portal:**

Provides you with full visibility of your satellite links around the world You can identify the availability of each link on an hourly, daily, weekly and monthly basis.

### **b) License facilitator:**

Work with local governmental agencies, regulatory bodies, customs and other organizations to secure cost-effective licensing. Schlumberger has VSAT operator licenses in the U.S., UK, Singapore, Brazil, Venezuela and Nigeria.

### **c) Customer Support Center (CSC):**

The CSC provides first line diagnostic support to you and to all of your remote sites, regardless of location. Manned 24 hours a day, 7 days a week, the CSC is notified immediately of any fault via the network management system.

### **d) Regional support and flying squad:**

Technical network support is available in all locations worldwide. Should a fault arise that cannot be resolved by our customer support center, an experienced engineer can be en route to your site in a matter of hours.

## **SOFTWARES USED:**

The list of software used by various disciplines in alphabetical order is mentioned below.

- A** Application Builder
- B** Basemap Plus, BHA Editor, BorTex, BorView,
- C** CemCADE, Charisma Developer's Kit (Charisma DK), COUGAR, CPS-3
- D** Data Browser, Data Exchange Manager (DAEX), DecisionPoint, Decision Tool Kit, DrillDB, Drilling Office, DrillsAFE, DrillViz
- E** ECLIPSE Simulators, ECLIPSE Options, ECLIPSE Compositional, ECLIPSE Blackoil, ECLIPSE FrontSim, ECLIPSE FloGrid, ECLIPSE Office, ECLIPSE Pre-and Post-Processors, ECLIPSE Thermal, ELANPlus
- F** FieldView, FieldView Field Data Collection Module, FieldView Production Accounting and Reporting Module, Fiscal Model Library, FloGrid, FloMatic, FloViz, Flux Boundary (ECLIPSE Option), FracCADE, Framework 3D
- G** GCRT, GeoFrame Developer's Kit (GFDK), GeoFrame Geology Office, GeoFrame Geophysics, GeoFrame Mapping & Modeling, GeoFrame Petrophysics, GeoFrame Synthetics, Geonet, GeoPlot, Geoshare, GeoViz, GeoViz Explore, GigaViz.
- H** HUTS
- I** IESX, IESX Developer's Kit (IESX DK), InDepth, Interactive Petrophysics
- L** Litho ToolKit, LiveQuest, LogDB, LogTRAK, LPM

**M** MathCube, MindShare

**O** OFM/Oilfield Manager, OpenSpirit, Osprey Reports, Osprey Risk

**P** Petrel Geophysics, Petrel Geology, PetroDesk, PetroView Plus,  
PIPESIM, PlanOpt, PrePlus, ProdMan, ProSource, ProSource Results  
Manager, ProSource Seismic Manager, PVTi

**R** ResSum

**S** SandCADE, SCAL, SEA 3D for GeoViz, Seismic Attribute ToolKit  
(SATK), Secure Data Access (SDA), SediView, SeisClass, Seismic  
Data Management System (SDMS), SideKick, SimCube, SimOpt,  
SmartAccess, SmartSection, SmartView, SpreadSheet Loader,  
StatPack, StimCADE, StrucView

**T** TDAS

**V** VFPi, VOLTS

**W** Well Design, WellComposite Plus, WellEdit, WellEye, WellPix,  
Well-ID, Welltest 200

**Schlumberger Oilfield Services (OFS):** is the leading supplier of services and technology to the international petroleum industry providing virtually every type of service to the upstream exploration and production industry. Schlumberger OFS is divided into two operating units: Reservoir Evaluation and Development and Schlumberger Oil & Gas Information Solutions.

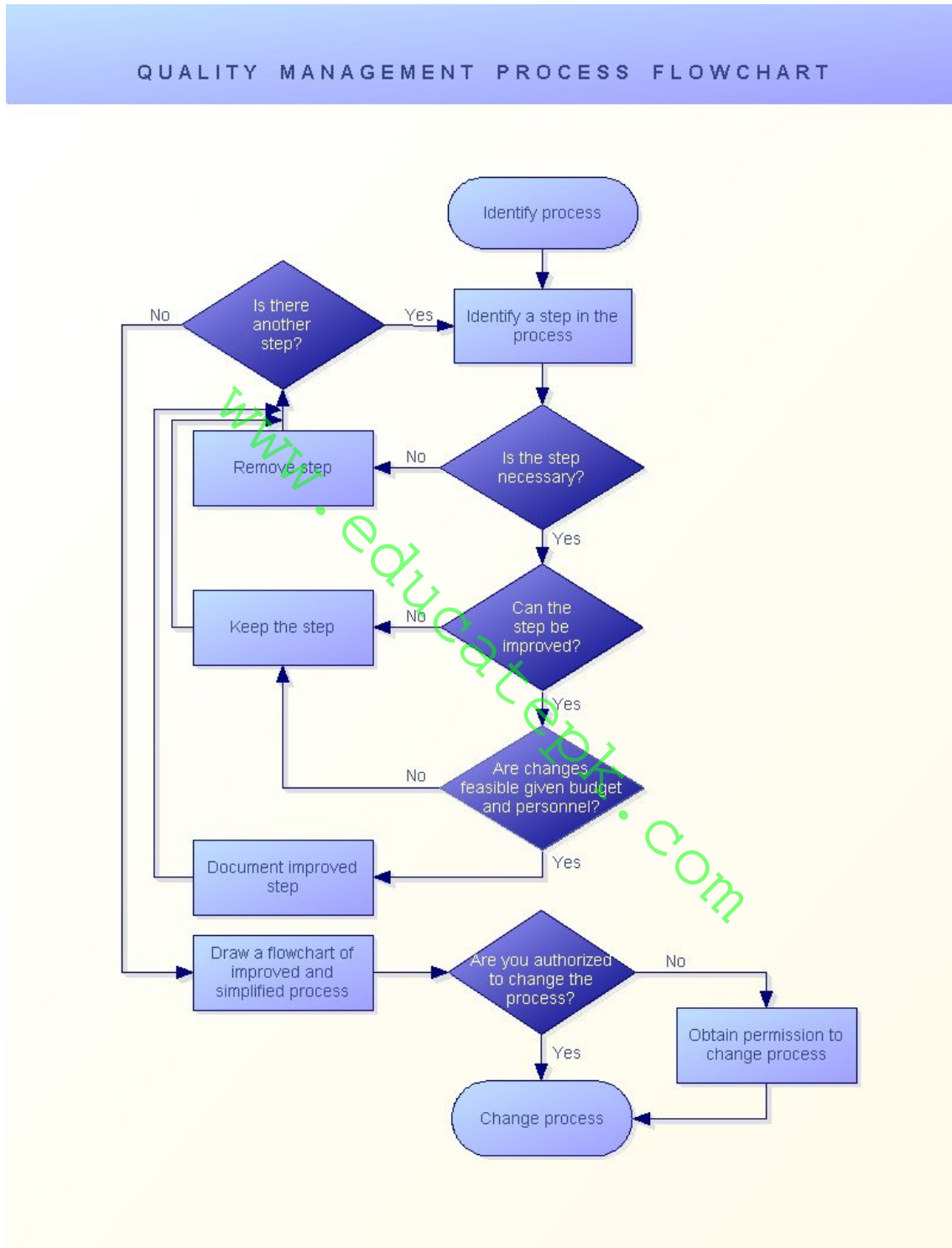
**Schlumberger Sema** is a leading information technology services company providing IT consulting, systems integration, managed services, products and IP network security solutions serving the oil and gas, telecommunications, utility, finance, transport and public sector markets.

**WesternGeco** jointly owned with Baker Hughes, is the world's largest and most advanced surface seismic company.

### **Total Quality Management**

Total Quality Management Process followed by the Schlumberger is the major process in the oil and gas field and there is need for the continuous improvement for the company and this benefit for the company in the growth strategy and innovation by the company.

Figure No5



## **System development process**

System development process is a set of activities methods best practices and automated tools that are used to developed continuously improved information system and software in Schlumberger.

### **Problem Analysis:**

After I.T departments employees survey it is clear that the uses of that system is so difficult for lower level staff like clerical staff, and due to overload of IT work showing hanging problems. Video conferencing showing very bad image due to lack of modern technological.

Features and an other important problems are huge repairing and maintaining cost that is bearing by the IT department every month. That system is not providing proper support to the several IT projects of Schlumberger.

### **Solutions**

- The IT department arranges proper training programs are all employees of the IT department.
- Easily accessibility of all tools of system.
- Using modern technology.
- Using economical technology
- Providing technical training for IT department related people.
- Keeping system up to date on urgent basis.
- Urgent response on subscriber complains.
- Alternate services must be available in case of failure of any function of system.
- Provide a proper security system in system controlling departments.
- Provide separate login accounts to relevant workers.

## **Preliminary Investigation & Problem Analysis**

Schlumberger had a vision to optimize their ability to manufacture and deliver product in a highly efficient manner, as well as standardize business processes across their six sites. At present Schlumberger has made agreements with a few companies about using ERP software.

### ➤ **MAPICS XA:**

Schlumberger Test & Transactions plans to access MAPICS XA concurrently across manufacturing sites to create what the company has termed a "Virtual Factory," where employees, partners and suppliers can access critical business information. Through the optimization tools and advanced planning functionality to be provided as part of MAPICS' future advanced planning and scheduling (APS) solution, the Virtual Factory will help Schlumberger forecast inventory status and demand and determine which site can manufacture the product in the quickest, most efficient manner.

### ➤ **MFG/PRO:**

QAD (Carpinteria, Calif.), a supplier of manufacturing management software, has signed a multi-million dollar license agreement with Schlumberger Ltd. (New York, N.Y.). Schlumberger will install QAD's MFG/PRO software at 18 international sites as the standard solution for its \$2.7 billion Measurement & Systems business units. With the installation, Schlumberger will integrate the entire financial, manufacturing, sales, distribution and field services when applicable for the units, which supply measurement-related products and services to utility and communications companies.

QAD's MFG/PRO enterprise resource planning (ERP) software environment enables multi-national manufacturers to manage information across their extended enterprise. It supports organizations by integrating multiple geographic sites and supply chain partners through a suite of integrated manufacturing, distribution, planning and financial application modules.

### **Competitive Advantage**

Schlumberger offers its clients four key advantages:

- Deep domain knowledge of exploration and production operations gained through 75 years of experience
- The service industry's longest commitment to technology and innovation through a network of 23 research, development and technology centers
- A global reach in more than 80 countries coupled to strong local experience and the diversity in thought, background and knowledge that more than 140 nationalities bring
- A commitment to excellence in service delivery anytime, anywhere.

### **Research and Development**

The company was founded by the two Schlumberger brothers who invented wireline logging as a technique for obtaining downhole data in oil and gas wells. Today, it continues to build on the industry's longest track record of providing leading edge E&P technology to develop new advancements-from reservoir to surface. Schlumberger has always invested significant time and money on research and engineering as a long-term strategy to support and grow its technology leadership. Short-term business cycles do not affect this. In 2008, we invested \$818 million in R&D for our oilfield activities. Schlumberger invests more each year in R&D than all other oilfield services companies combined.

### **Schlumberger Products, Services and Solutions**

Schlumberger services and solutions combine domain expertise, best practices, safe and environmentally sound well site operations, innovative technologies, and high-quality support aimed at helping its customers increase oilfield efficiency, lower finding and producing costs, improve productivity, maximize reserve recovery, and increase asset value in a safe, environmentally sound manner.

Today, Schlumberger Oilfield Services solutions include open-hole and cased-hole wireline logging; drilling services; well services, such as cementing, coiled tubing, stimulations and sand



control; well completion services including well testing and artificial lift; interpretation and consulting services; and integrated project management. Strong technical and operational support to the field is vital to the success of any complex global operation that includes remote locations. The key is to provide real-time linkage with world-class experts and knowledge, delivering the latest and best problem-solving capabilities-anywhere, anytime. The company's InTouchsupport.com knowledge management tool improves field access to Schlumberger technology centers through the most advanced IT tools, 24-hours a day, seven days a week.

Enhancing core E&P operations to improve production, increase reserves and drill better wells requires the integration of innovative information technology. **Schlumberger Information Solutions** (SIS) offers a unique combination of people and processes, technology and infrastructure, and real-time IT enablers-delivering key value-adding solutions to overcome a myriad of challenges confronting industry operational processes. SIS offers information management, software technology and infrastructure services. Combined with the domain experience available through the Business Consulting group, these enable oil and gas companies to enhance their workflows and achieve their goals.

As the industry's focus is moving towards maximizing post-plateau production and ultimate recovery, oil companies have to face more and more resource intensive projects. Integrated Project Management (IPM) is the Schlumberger response to this challenge and a significant growth area for Schlumberger. IPM activity is characterized by long-term relationships between the customer and Schlumberger. It offers a combination of engineering, process management and understanding of Schlumberger segment technologies. As well as providing technology and expertise, Schlumberger often works with local subcontractors to harness local knowledge and experience. Schlumberger has achieved a number of successes in IPM in particular in Mexico. The Burgos project for example, now in its seventh year, has delivered 237 completed wells, which include the drilling of 2.3 million ft of hole. The benefits to the customer have included accelerated production, reduced capital expenditure and increased efficiency

## **Requirement analysis Phase**

Schlumberger can satisfy today's job requirements analysis and anticipate future needs.

- ✓ **Data & Consulting Services**

Processing, Interpretation, and Integration of E&P Data.

- ✓ **Geosciences & Engineering Consulting**

From Single-Well Analysis to Field Development Planning.

- ✓ **Integrated Solutions**

Innovative, Optimized Processes Spanning the E&P Cycle.

- ✓ **Seismic Reservoir Services**

Applying seismic technology throughout the life of the field.

- ✓ **Integrated Project Management**

Complex project solutions on an outsourced or collaborative basis.

- ✓ **Business Consulting**

Engages customers to help deliver sustainable performance improvements.

This research utilized the descriptive method in acquiring information for evaluation and analysis. The descriptive process of research was believed to be more suited in this kind of investigation because it seeks direct response from the respondents of the study.

This method ascertains the prevailing conditions in a particular setting and experiences in a group. Actually this method is essentially a technique of using quantitative description of the general characteristics of a group under study seeks answers to questions raised as to the real facts relating to existing conditions. It also provides information who, what, how, where and when of a study.

## System Design Phase

Decision Point allows professionals and experts to make better decisions in much less time than usually required to make these decisions. It is **designed** specially to help in decision-making related to oil and gas organizations. Decision Point provides a range of workflow solutions and expert services that help improve business results.

Schlumberger's technology initiative will allow the utilization of digital video technology to enable live and stored multimedia to flow freely within the corporate network and beyond, making it as prolific as the current use of e-mail. These systems will appear as just another application on the LAN/WAN accessible through custom user interfaces.

An institution's Information System should be designed to achieve the following goals:

- Provide an objective system for recording and aggregating information.
- Enhance communication among employees.
- Reduce expenses related to labor-intensive manual activities.
- Support the organization's strategic goals and direction.

## **Constructing & Testing new System**

### **METHOD AND TOOLS**

#### **Respondents of the study**

In this study, major group of respondents involved the employees of different organizations.

Researcher has to study the role of Information System in managerial success in the field of the telecommunication in government, semi-government and private sector. The organizations which researcher selects are Pakistan Telecommunication Company Limited, LT Engineering & Trade Services Limited and Mobilink. Researcher selected there head quarters, which are located in Islamabad and Hassanabdal.

#### **Sampling Procedure**

The sampling design used for this research is the Purposive sampling because researcher's main aim is to check the perception of respondents about role of Information System in management success.

The researcher distributed the questionnaire to the desired respondents in their offices. It took us to accomplish within 2 to 3 weeks to gather the data. But this collection of data is not easy because in organizations every one is busy and they have no much time for this activities but researcher thanks them very much for helping him in this project.

#### **Research Instrument**

For obtaining proper information, it is necessary that a questionnaire must be designed in such a way that it looks convenient to respondents to fill it easily in 2 to 4 minutes. For that purpose researcher develop a questionnaire. This questionnaire is a close ended and respondents were asked to check any one of the given alternatives following each question.

The survey questionnaire seeks the perception of the respondents with respect to the factors that influence the role of Information System in managerial success. The scale used for these questions was liker scale. This scale specifically utilizes the anchor of Strongly Agree, Agree, Indifferent, Disagree and Strongly Disagree. It is also convenient to researcher, when he apply a testing on it.

#### **Statistical Tools**

The researcher used the following statistical tools in order to give clear and reliable analysis and interpretation of the data:

1. Frequency and percentage distribution was used to determine the relationship of the perception.
2. Weighted mean was computed to establish the scores of the respondents for each question in the questionnaire. The formula is:

$$W_m = \sum W_i X_i / \sum W_i$$

Where,

$W_m$  = Weighted mean.

$W$  = Weights.

$X$  = Frequency.

$I$  = Number of cases

## **Implementation, Maintenance & Support**

The economic measure of Information system effectiveness, as the "conversion of Information system investment into real output" question in organizational paradigms where politics and conflict are important motivating factors. He found "re-distribution of power" to be an important impact of Information system implementation while other researchers have described the roles played by leadership and managerial control issues in Information system implementation decisions.

Information System's purpose is to improve the performance of the organization by improving the quality of managerial decisions. An effective information system collects, codes, stores synthesizes and present information to answer important operating and strategic questions. It is a major strategic source for monitoring environment changes, identifying competitive threats and assisting in the implementation, evaluation and control of strategy.

PTCL understands the highly significant role of information technology in today's global business environment, and thus pays special attention to the implementation of IT in all of its departments. Every department has its own network system and database that provides increased communication and reliable information.

The importance of maintaining a consistent approach to the development, use, and review of Information systems within the institution must be an ongoing concern. Information system should have a clearly defined framework of guidelines, policies or practices, standards, and procedures for the organization. These should be followed throughout the institution in the development, maintenance, and use of all Information systems.

## **SWOT ANALYSIS**

### **Strengths**

- 1) Largest operational network and infrastructure within ICT (Information & Communication Technologies) segment.
- 1) An integrated Monopoly
- 2) Market leadership in Local loop, Wireless local loop (WLL) and Fixed telephony.
- 3) PTCL (Ufone) is market challenger in GSM segment
- 4) Ufone is performing well though Warid and Telenor are tough competitors. PTCL, Ufone's profitability increased by 49.2 percent to Rs 977 million in 1H/FY07 as compared to Rs 655 million in the corresponding period last.
- 5) Competitors still depend on PTCL network either directly or indirectly
- 6) Experienced Telecom Resources

### **Weakness**

- 1) Not been able to nurture its growth around customer services oriented strategy
- 2) Internal organizational and business processes issues
- 3) Monopolistic culture has further added to its complexities
- 4) Paknet, the internet service provider arm of ptcl continues to incur losses due to poor management and lack of network optimization
- 5) Ptcl-v, the fixed wireless phone service is poor
- 6) Over employment & low productivity.
- 7) Slow decision making including external interferences.
- 8) Corporate culture akin to government departments.

### **Opportunities**

- 1) Low Teledensity of Pakistan.
- 2) Have vast infrastructure and real estate assets which can be leveraged further.
- 3) Global connectivity reliability has been improved. PTCL is expanding the long distance and infrastructure side through spreading out two sea-me-we submarine cables..
- 4) Partnership with new entrants in a deregulated environment.
- 5) Scope for efficient/cost effective operations.

### **Threats**

- 1) Increased competition in long distance continues to exert pressure.
- 2) VOIP use is increasing despite ambiguous and discriminatory policies
- 3) Exposure to market competition
- 4) Migration to Cellular Networks
- 5) Ability to Attract & Retain Quality Professionals
- 6) Reduction in International Settlement Rates

### **Conclusions**



In current era where information technology has been a revolution for marketplace and has greatly influenced the way of every field of life. Now companies rely heavily on innovations and technological changes in order to compete in a competitive environment.

Information System increases the communication among management levels. It leads the employees to perform their tasks more efficiently and effectively and it save the time and cost of firm.

Firms with weak information system skills are at a competitive disadvantage. Strengths in Information System allows firm to establish distinctive competencies in areas such as low-cost manufacturing and good customer services.

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## **Recommendations**

- When the work overload occurs that causes the inefficiency in data processing. Information System begins to be applied to well structure tasks within individual processes for processing high volume data of daily operations by automating those tasks.
- Secondly, when there is the demand for linking and coordinating varied tasks to facilitate massive data flow and communication. Information System plays an important role in processing a variety of data or information, improving the efficiency in operational coordination and managerial control within and across organizations.
- Finally, when there is the demand for integrating business processes to cope with rapidly changing environment, Information System plays a vital role in processing high quality of data or information, integrating inter-related operational activities and adding sophistication to the decision-making process for operational and managerial control within and across the organizations.
- Provide an objective system for recording and aggregating information.
- Enhance communication among employees.
- Reduce expenses related to labor-intensive manual activities.
- Support the organization's strategic goals and directions.

**0 Critical analysis of the theoretical concepts relating to practical experiences the relate the theoretical concepts with your practical experience during internship in MIS department**

### **10.1 Requirement analysis**

### **10.2 system Design**

### **10.3 Implementation**

MAPICS, Inc. is a leading provider of Enterprise Resource Planning (ERP) business solutions to manufacturers. Schlumberger Test & Transactions (a business unit of Schlumberger Limits) has selected MAPICS XA to enhance its supply chain capabilities and standardize its business processes across multiple sites for part of its manufacturing operations. The agreement includes plans for implementation of MAPICS XA at six Schlumberger Test & Transactions manufacturing sites in North America and Europe.

### **10.4 Maintenance**

Schlumberger has maintained information systems for transactions and now the latest development has been the development of information management systems for e-transactions.

## SWOT ANALYSIS

### Strengths

- 7) Such operations support systems produce a variety of information products for internal and external use.
- 8) Information system provides management with needed information on a regular basis.
- 9) Information system is a process that provides the information necessary to manage an organization effectively.
- 10) Competitors still depend on Schlumberger company either directly or indirectly

### Weakness

- CRM is very important for organization now a day. but Schlumberger has less training of employees .
- Schlumberger forecast inventory status and demand and determine which site can manufacture the product, but not efficient result
- Field View Field Data Collection Module not properly working.
- Net working security is weak.
- Schlumberger has not maintained information systems for transactions.
- There is lack of expert software engineers.
- Some time weakness appears such as poor relational design, too much duplicated data, and no (appropriate) primary keys.

### **Opportunities**

- 6) Provide the modern technology
- 7) Provide a qualified software engineers.
- 8) Have vast infrastructure and real estate assets which can be leveraged further.
- 9) Partnership with new entrants in a deregulated environment.
- 10) Scope for efficient/cost effective operations.

### **Threats**

- 7) VOIP use is increasing despite ambiguous and discriminatory policies
- 8) Exposure to market competition
- 9) Ability to Attract & Retain Quality Professionals
- 10) Weak security system of network.

## **11 Conclusions**

Schlumberger has deep domain knowledge of exploration and production operations gained through 75 years of experience . The service industry's longest commitment to technology and innovation through a network of 23 research, development and technology centers A global reach in more than 80 countries coupled to strong local experience and the diversity in thought, background and knowledge that more than 140 nationalities bring .

Schlumberger services and solutions combine domain expertise, best practices, safe and environmentally sound well site operations, innovative technologies, and high-quality support aimed at helping its customers increase oilfield efficiency, lower finding and producing costs, improve productivity, maximize reserve recovery, and increase asset value in a safe, environmentally sound manner.

Schlumberger has maintained information systems for transactions and now the latest development has been the development of information management systems for e-transactions. Schlumberger is ranked overall first in the market of oil and gas companies and still has very little risk prediction.

## 12. References

- ✚ Personal Observations
- ✚ Existing Data
- ✚ Sales Manager Shahzad Ahmed and Noshad Ali MIS –Manager of Schlumberger.

### Internet

In order to collect the information about Schlumberger I used the site of Schlumberger and also I have seen the other search engines on internet which are as follows.

- [www.Schlumberger.com.pk](http://www.Schlumberger.com.pk)
- [www.google.com.pk](http://www.google.com.pk)

### Books Used

An introduction of data structures with applications by Trembly

Management Information systems by O'Brien /Marakas

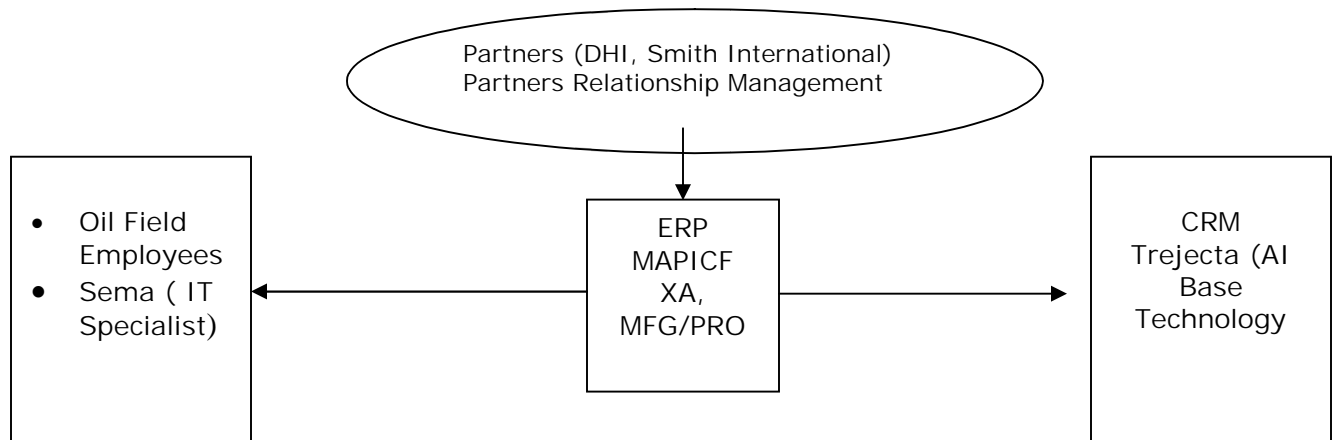
Data base management systems by Elmasri & Navathe

### 13. Annexes

#### Major competitors

COMPANY	SYMBOL	MARKET CAP.
Schlumberger Ltd	SLB	40.71 B
Halliburton Co	HAL	21.49 B
Transoceanic Inc	RIG	15.51 B
Baker Hughes Inc	BHI	15.26 B
Enbridge Inc	ENB	9.06 B
Nabors Industries Ltd	NBR	8.80 B

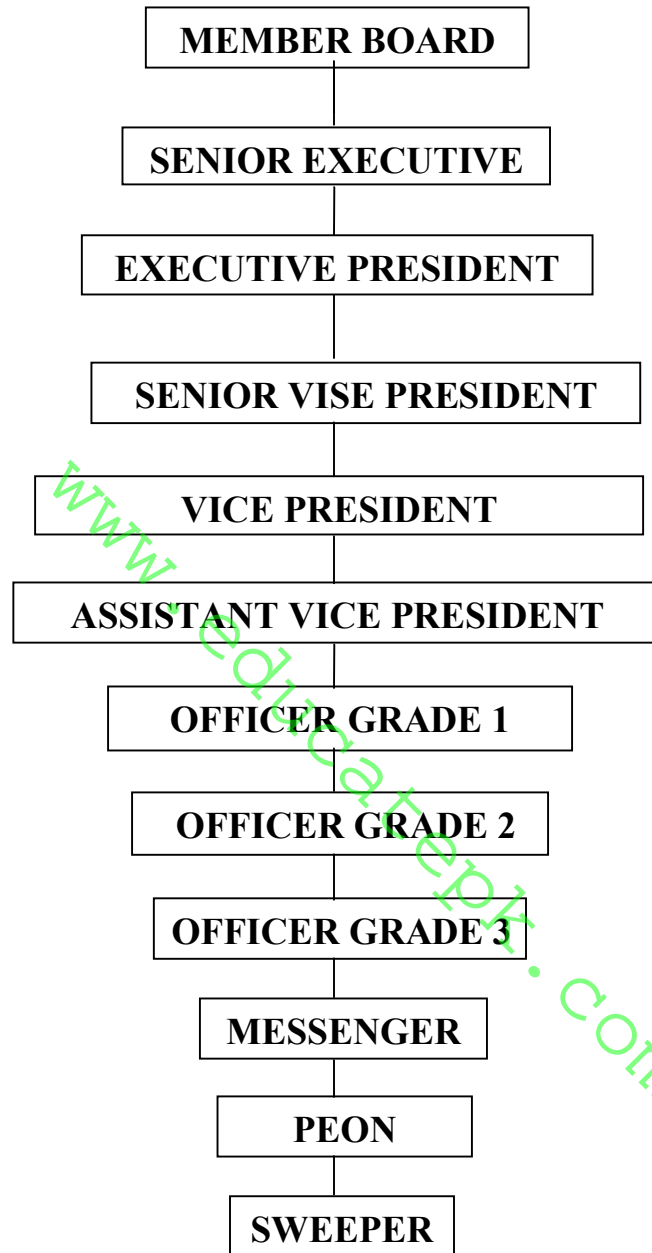
#### Cross Functional System





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**Structure of Department**



### Total quality management process flow chart

